

Fannie Mae Benchmark CPR™ Commentary

July 2021

Key Highlights

- This month, we highlight prepayment trends observed in June. The 30-Year Benchmark CPR3 for the Fannie Mae cohort decreased 17.4% to 19.4 CPR. The 15-Year Benchmark CPR3 for the Fannie Mae cohort also declined this month to 17.5 CPR, a decrease of 16.3%.
 - We compare trends in the 30-year and 15-year historical BCPR data, focusing on the seller UPB exhibiting a MoM decrease of more the 10% in the BCPR3 and observe a rebound in share of seller UPB in the >130% Note Rate Adjusted BCPR3 cohort.
 - Using the BCPR Component Profile table, we explore the shifting collateral profiles of the component populations underlying the BCPR3 and compare the most recent component profile to the overall Fannie Mae 30-year TBA-eligible universe.
 - We analyze the expanded BCPR Heatmap view and observe continued slowdown in the Investor story.
 - Lastly, we feature select S-curves on various Fannie Mae 30-year cohorts using the Cohort Analyzer tool in Data Dynamics.
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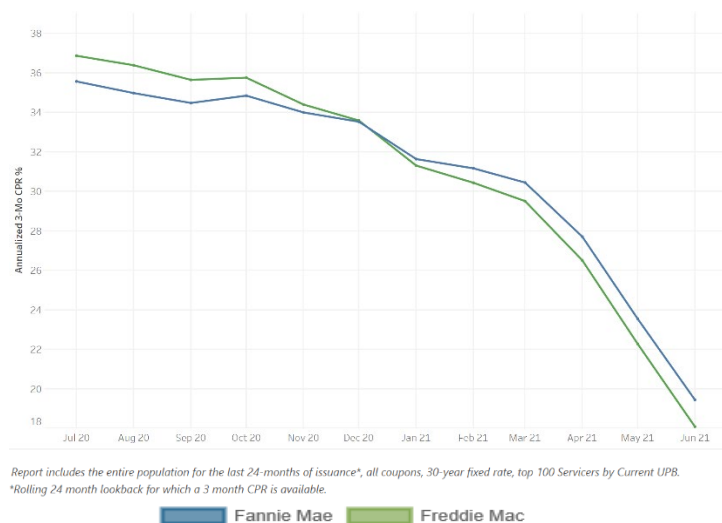
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Visit **Data Dynamics** to explore the tools used in this commentary.

Monthly Benchmark CPR Results

30 Year Benchmark CPR



The June 30-year Benchmark CPR3 (BCPR3) for the Fannie Mae cohort decreased 17.4% to 19.4 CPR – from 23.5 CPR in May – which marks eighth straight monthly decreases. While the June 2021 1-month component increased 7.3% versus the May 1-month component, it decreased 39.1% versus the March 1-month component that it replaces in the BCPR3 calculation (see **Table 1a**).

Using a prevailing 30-year mortgage rate of 2.90%, which is 9bps lower MoM, we estimate that 48.0% of all mortgages – and 59.7% of conventional mortgages – remain at least 50bps in the money. This is a slight decrease in the refinancable share of the population MoM.

Report includes the entire population for the last 24-months of issuance*, all coupons, 30-year fixed rate, top 100 Servicers by Current UPB.
*Rolling 24 month lookback for which a 3 month CPR is available.

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Exhibit 1

Table 1a. Components of Fannie Mae's 30 Year May and June BCPR Results

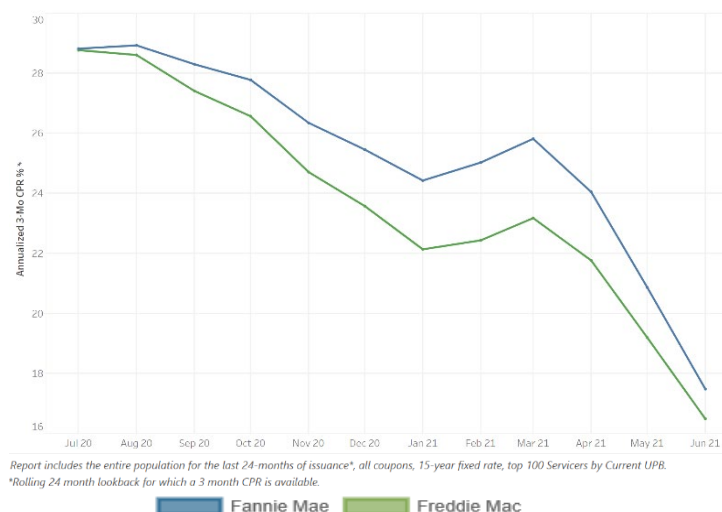
Reporting Period	BCPR3	BCPR3 Components			
		Mar	Apr	May	Jun
May 2021	23.5	31.2	21.7	31.2	
June 2021	19.4		21.7	17.7	19.0

Table 1b. Components of Fannie Mae's 15 Year May and June BCPR Results

Reporting Period	BCPR3	BCPR3 Components			
		Mar	Apr	May	Jun
May 2021	20.9	27.5	19.2	16.2	
June 2021	17.5		19.2	16.2	17.1

Table 1: Components of Fannie Mae's May and June BCPR Results

15 Year Benchmark CPR



The Fannie Mae Cohort 15-year Benchmark CPR3 (BCPR3) came in at 17.5 CPR, which represents a 16.3% decrease from 20.9 CPR in May. Similar to the 30-year metric, the June 2021 1-month component increased 5.6% versus the May 2021 1-month component but decreased 37.8% versus the March 2020 1-month component that it replaces in the calculation. See **Table 1b** for the one-month components of FNM cohort 15-year BCPR3.

Report includes the entire population for the last 24-months of issuance*, all coupons, 15-year fixed rate, top 100 Servicers by Current UPB.
*Rolling 24 month lookback for which a 3 month CPR is available.

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Exhibit 2

Historical Benchmark CPR Data

Tables 2 and 3 below provide an updated summary of key trends of the 30-year and 15-year historical BCPR data. As a reminder, historical BCPR data can be found on the [Download Data page under the MBS section of Data Dynamics](#).

Fannie 30-year BCPR3 speeds decreased 17.4% MoM. The 7.3% MoM increase in the 1-month component of the BCPR3 calculation was not enough to offset the two prior months' speeds, which resulted in the BCPR3 decline. The last two months' BCPR3 speeds declined by 17.4% and 15.2% respectively, which results in the concentration of lenders in the **Share of Seller UPB with >10% MoM BCPR3 Decrease** bucket remaining elevated at 89% share as compared to 86% last month.

Fannie 15-year speeds dropped 16.3% MoM from down 12.9% one month prior, resulting in a similar month-over-month concentration in the **Share of Seller UPB with >10% MoM BCPR3 Decrease** of 86% versus 71% last month (see orange highlights below). Lenders with a **Note Rate Adjusted BCPR >130** rebounded to 16% from the prior month's drop to 7%, primarily driven by one large seller shifting above the 130% measurement threshold - from 128% of cohort to 134%. The same seller impacted the 15y **Note Rate Adjusted BCPR >130** contributing to the increase to 25% from 16%.

Summary of Fannie Mae 30 Year Historical BCPR Data - Seller view

Metric	Jun-2021	May-2021	Apr-2021	Jun-2020
Cohort BCPR1	16.6	15.2	18.6	29.8
Cohort BCPR3	19.4	23.5	27.7	36.9
Cohort BCPR6	31.0	34.3	37.5	35.7
WA BCPR3 of Top 25 Sellers*	21.4	25.9	30.5	37.6
WA NR-Adjusted % of Cohort for Top 25 Sellers*	111.5	110.7	111.3	102.4
BCPR3 Range (Max-Min) for Top 100 Sellers*	28.3	36.1	38.5	40.5
WA Standard Deviation BCPR3 for Top 100 Sellers*	4.8	5.9	6.6	5.3
WA Standard Deviation BCPR3 for All Sellers	5.9	7.1	8.1	6.6
Total Current UPB (\$B)	1394	1326	1252	728
% of Cohort UPB w/ NR-Adjusted BCPR3 0-90% of Cohort	30%	30%	33%	24%
% of Cohort UPB w/ NR-Adjusted BCPR3 90-110% of Cohort	32%	33%	31%	49%
% of Cohort UPB w/ NR-Adjusted BCPR3 110-130% of Cohort	22%	31%	22%	23%
% of Cohort UPB w/ NR-Adjusted BCPR3 >130% of Cohort	16%	7%	14%	4%
Share of Seller UPB with >10% MoM BCPR3 Increase	1%	1%	2%	19%
Share of Seller UPB with 5-10% MoM BCPR3 Increase	1%	1%	2%	33%
Share of Seller UPB with 0-5% MoM BCPR3 Increase	1%	1%	4%	33%
Share of Seller UPB with 0-5% MoM BCPR3 Decrease	3%	3%	14%	7%
Share of Seller UPB with 5-10% MoM BCPR3 Decrease	5%	8%	43%	7%
Share of Seller UPB with >10% MoM BCPR3 Decrease	89%	86%	36%	1%

Table 2

Summary of Fannie Mae 15 Year Historical BCPR Data - Seller view

Metric	Jun-2021	May-2021	Apr-2021	Jun-2020
Cohort BCPR1	15.2	13.9	16.1	22.8
Cohort BCPR3	17.5	20.9	24.0	28.8
Cohort BCPR6	26.8	28.8	31.1	28.4
WA BCPR3 of Top 25 Sellers*	18.6	22.1	25.7	30.2
WA NR-Adjusted % of Cohort for Top 25 Sellers*	114.3	113.6	114.7	105.1
BCPR3 Range (Max-Min) for Top 100 Sellers*	33.0	42.3	49.1	42.1
WA Standard Deviation BCPR3 for Top 100 Sellers*	4.3	5.5	6.5	7.1
WA Standard Deviation BCPR3 for All Sellers	5.8	7.1	8.4	8.7
Total Current UPB (\$B)	254	235	217	89
% of Cohort UPB w/ NR-Adjusted BCPR3 0-90% of Cohort	44%	47%	46%	41%
% of Cohort UPB w/ NR-Adjusted BCPR3 90-110% of Cohort	15%	9%	9%	21%
% of Cohort UPB w/ NR-Adjusted BCPR3 110-130% of Cohort	15%	27%	29%	25%
% of Cohort UPB w/ NR-Adjusted BCPR3 >130% of Cohort	25%	16%	16%	12%
Share of Seller UPB with >10% MoM BCPR3 Increase	3%	4%	9%	45%
Share of Seller UPB with 5-10% MoM BCPR3 Increase	1%	2%	4%	26%
Share of Seller UPB with 0-5% MoM BCPR3 Increase	3%	3%	12%	19%
Share of Seller UPB with 0-5% MoM BCPR3 Decrease	3%	5%	13%	4%
Share of Seller UPB with 5-10% MoM BCPR3 Decrease	4%	14%	26%	4%
Share of Seller UPB with >10% MoM BCPR3 Decrease	86%	71%	36%	4%

Table 3

BCPR Component Profiles

The BCPR Component Profiles table breaks out the component populations of the BCPR3 and highlights the evolution of the underlying profile. As a reminder, the differentiating characteristic of the BCPR is its unique reference population: a 24-month rolling issuance window of loans with at least three months of seasoning (BCPR3). Gaining visibility into the collateral profile of each component of the BCPR3 can help market participants better understand trends in this metric.

As seen in **Table 4** below, the first four records (a-d) summarize the respective collateral profiles of the Mar-21 through Jun-21 BCPR components as of the start of each respective month. In other words, each rep line represents the collateral profile that drove that component month's performance. The Mar-May components comprise the May BCPR3, while the Apr-Jun components comprise the Jun BCPR3. The BCPR population's credit profile has continued to improve month over month throughout this refi wave, and the weighted average WAC of the population continues to decline, as higher WAC loans refinance into lower rates.

The bottom half of the table isolates the four sub-populations that distinguish the May-21 and Jun-21 component populations. Items f-g summarize the profile of loans that paid off in Jun-21 and May-21, respectively. Not surprisingly, loans that prepaid exhibit higher WACs than the respective component population and are more seasoned. Relative to the population of loans that paid off in May, the weighted average WAC and WALA of Jun pay-offs declined, suggesting that servicers are once again refocusing their attention on less seasoned refi candidates or hinting at the first signs of burnout in more seasoned populations. Reversing the recent trend, the credit quality of loans that paid off in Jun is stronger than that of loans that paid off in May. Finally, Item h summarizes the profile of Apr-21 issuances, which replace Apr-19 issuances (summarized in Item i below), in the Jun component. Not surprisingly, the most recent month of issuance (Apr-21) to be included in the BCPR3 component exhibits a much lower WAC, higher weighted average loan size, higher credit quality, and lower PMM share than the most seasoned month of issuance (Apr-19) that it replaces.

Finally, we compare the most recent BCPR component profile to the overall Fannie Mae 30-year TBA-eligible universe, which is the population that many market participants focus on when analyzing monthly prepayments. Because the latter population is not limited by an issuance window, we observe that it is more seasoned than the Jun BCPR component population. The higher prepayments observed on the overall population are likely attributable to a higher weighted average WAC and weighted average original loan size.

Table 4. Fannie Mae 30-Year BCPR Component Collateral Profiles

	Orig amt (\$MM)	Beg bal (\$MM)	Beg loan count	WA OLS	WA WAC	WA WALA	WA FICO	WA LTV	WA DTI	% CA	% TPO	% AW	% Owner	% Investor	% Purchase	SMM	CPR
Fannie Mae BCPR																	
a. Mar component	1,265,488	1,238,954	4,637,283	272,894	3.40	10	755	75	35	20%	40%	31%	91%	5%	41%	3.1	31.2
b. Apr component	1,308,399	1,280,009	4,784,297	273,478	3.34	10	755	74	35	20%	40%	32%	91%	5%	40%	2.0	21.7
c. May component	1,380,478	1,349,812	5,033,575	274,254	3.29	10	756	74	34	21%	40%	33%	91%	5%	39%	1.6	17.7
d. Jun component	1,454,756	1,421,712	5,272,347	275,922	3.25	10	756	74	34	21%	39%	34%	91%	5%	39%	1.7	19.0
e. MoM profile change	74,278	71,900	238,772	1,668	-0.04	0	0	0	0	0%	0%	1%	0%	0%	-1%	7.7%	7.0%
f. Jun pay-offs	24,792	23,926	84,580	293,467	3.69	14	748	76	36	25%	46%	29%	92%	5%	38%	100.0	100.0
g. May pay-offs	21,859	21,068	74,371	294,216	3.78	15	747	76	36	26%	47%	28%	92%	5%	40%	100.0	100.0
h. Apr-21 issuances	105,564	104,985	359,259	293,837	2.95	2	756	72	34	22%	38%	39%	91%	5%	35%	0.3	3.8
i. Apr-19 issuances	9,949	9,444	48,277	206,085	4.79	25	734	80	38	14%	50%	7%	86%	9%	70%	5.3	48.1
Fannie Mae universe																	
j. Jun universe	9,491,467	2,521,223	11,875,990	308,116	3.64	35	751	74	N/A	N/A	40%	21%	89%	7%	43%	2.3	24.6
k. Diff vs. Jun component	8,036,711	1,099,511	6,603,643	32,194	0.39	26	-5	1	N/A	N/A	0%	-12%	-2%	1%	4%	0.6	5.6

Note: Profile calculations use public loan-level disclosures and Fannie Mae's BCPR methodology to define populations.

This Month's Prepayment Observations

In **Exhibit 4** we use the BCPR1 Heatmaps to highlight prepayment performance of various loan cuts. We add the MoM change and the MoM percentage change. Note that the Investor cut is listed twice. The first instance is the Investor story as part of a specified pooling waterfall. The second instance is a pure isolation of all investor loans in relation to principal residence and second homes. Note the UPB differences between the two, as several investor loans are pooled in the low loan balance cuts, etc. The most notable observation from this exhibit is the continued slowdown in the Investor story despite the daycount-led increase in overall speeds. Given the Treasury's PSPA plan to cap GSE concentration in various products, including Investor loans, it was only a matter of time before prepays began to slow on investor loans more than other stories.

Exhibit 4. Mo/Mo Percentage Changes of Various Spec & Loan Cuts on the BCPR1 Heatmap

Cut	Orig Amount (\$ MM)	Current UPB (\$ MM)	20-Jul	20-Aug	20-Sep	20-Oct	20-Nov	20-Dec	21-Jan	21-Feb	21-Mar	21-Apr	21-May	21-Jun	Mo/Mo Change BCPR1	Mo/Mo % Change
85k	\$11,567	\$10,336	13.87	12.18	13.28	13.38	12.3	13.06	10.62	10.75	13.21	11.71	10.44	11.12	0.68	7%
110k	\$24,445	\$21,721	16.09	14.91	15.8	15.41	14.22	15.86	12.21	12.81	15.15	12.48	11.15	12.36	1.21	11%
125k	\$25,031	\$22,098	17.2	16.16	16.04	16.23	15.51	15.75	13.62	13.73	16.88	13.23	11.91	12.58	0.67	6%
150k	\$57,921	\$50,802	18.42	16.85	17.69	17.92	16.14	16.9	14.18	14.86	17.5	13.54	11.68	12.94	1.26	11%
175k	\$75,896	\$65,939	19.7	19.14	19.66	19.82	17.66	18.46	15.63	16.34	18.61	14.29	12.21	13.56	1.35	11%
200k	\$100,637	\$86,662	21.95	20.02	21.65	21.67	18.74	19.99	17.56	17.64	19.64	14.98	12.38	13.77	1.39	11%
225k	\$112,752	\$96,006	23.54	21.96	22.98	22.7	19.69	20.99	18.94	19.45	21.4	16.03	12.89	14.61	1.72	13%
NY	\$46,410	\$41,964	17.48	15.61	16.41	17.77	15.65	15.3	12.5	12.4	14.54	10.79	8.39	7.92	-0.47	-6%
TX	\$86,009	\$71,729	27.29	25.42	25.72	25.03	21.34	22.89	22.29	20.78	24.87	17.85	15	16.13	1.13	8%
FL	\$78,689	\$67,429	24.07	22.51	23.42	23.42	19.38	21.83	18.66	19.93	22.64	16.75	13.55	15.1	1.55	11%
PR	\$426	\$405	8.99	11.92	7.97	12.32	14.38	4.36	11.34	5.69	6.85	7.49	5.09	4.84	-0.25	-5%
LTV>=95	\$161,496	\$127,499	30.48	28.51	29.68	30.93	27.89	30.79	27.91	30.28	32.44	23.29	18.71	20.5	1.79	10%
Investor	\$52,929	\$43,673	25.99	24.34	25.4	27.14	22.9	25.43	23.46	24.84	27.66	20.7	16.86	15.91	-0.95	-6%
FICO<700	\$105,689	\$82,273	30.61	29.56	30.12	31.8	29.39	31.93	26.9	28.24	31.76	24.97	21.69	22.51	0.82	4%
Non-Spec	\$985,911	\$758,127	32.99	33.38	35.01	35.9	31.13	33.8	30.73	31.26	30.89	19.57	15.69	17.35	1.66	11%
Retail	\$1,124,199	\$939,590	24.24	23.28	24.43	24.87	21.84	23.88	21.35	22.29	24.2	16.59	13.64	15.17	1.53	11%
Correspondent	\$491,999	\$362,039	34.38	34.24	36.71	37.38	33.11	35.07	31.72	32.23	33.53	23.4	18.31	19.54	1.23	7%
Broker	\$310,611	\$245,034	29.19	30	30.62	33.71	29.35	33.31	30.7	30.93	28.82	19.03	16.42	17.73	1.31	8%
Purchase	\$744,919	\$599,871	31.07	28.97	29.57	29.78	25.92	27.28	24.52	25.66	28.13	19.96	15.42	16.14	0.72	5%
Refi	\$816,873	\$660,887	23.72	25.47	27.63	28.89	25.01	27.93	25.65	26.02	25.84	16.52	14.17	16.14	1.97	14%
Cash-out	\$364,130	\$285,905	29.51	29.56	31.49	32.78	29.7	32.3	27.87	28.1	28.9	20.83	17.16	18.72	1.56	9%
Principal	\$1,762,571	\$1,409,714	28.68	28.26	29.67	30.43	26.7	28.96	26.07	26.73	27.64	18.7	15.3	16.82	1.52	10%
Second Home	\$69,620	\$57,853	28.17	25.9	26.4	26.86	22.35	24.15	21.26	21.58	23.61	17.44	13.35	14.29	0.94	7%
Investment	\$93,611	\$79,096	22.94	21.38	22.22	23.56	20.5	22.13	19.85	21.1	24.15	18.68	14.96	14.84	-0.12	-1%
Std	\$1,285,786	\$1,024,663	28.66	27.75	29.1	29.95	26.42	28.44	25.39	26.55	28.61	20.3	16.23	17.39	1.16	7%
AW	\$640,027	\$522,000	27.45	28.19	29.55	30.07	25.82	28.5	26.03	25.61	24.58	15.29	13.17	15.09	1.92	15%

MBS Cohort Analyzer Reports

Below, we continue featuring S-curves for various Fannie Mae 30-year cohorts for different historical performance periods to see how relative prepay behavior has evolved over time. Prepay sensitivity is displayed for the June activity, the previous month, six months ago and a year ago. We highlight performance on FICO, Loan Size, LTV, Channel, Loan Purpose, Selected States, Occupancy, and Appraisal Waiver Status in the snapshots below (See **Exhibits 5-12**). We invite readers to review our [MBS Cohort Analyzer User Guide](#) to review various ways to utilize this tool.

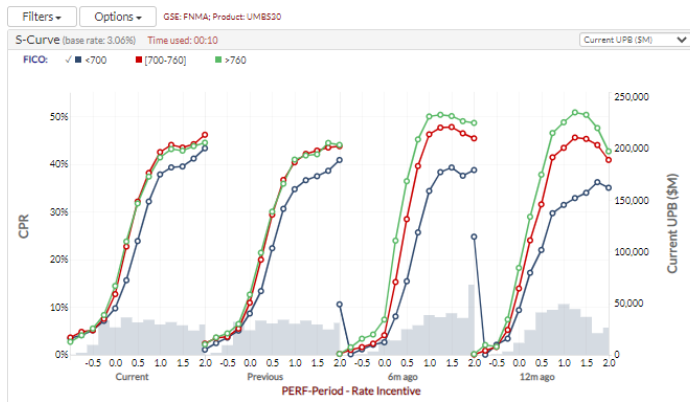


Exhibit 5: S-Curves for FICO Buckets Over Various Performance Periods

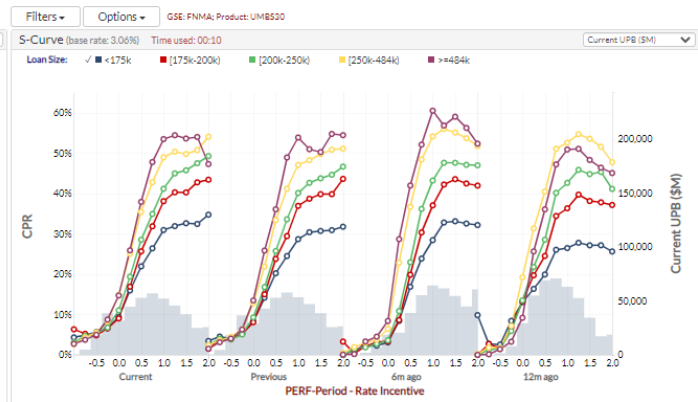


Exhibit 6: S-Curves for Loan Size Buckets Over Various Performance Periods

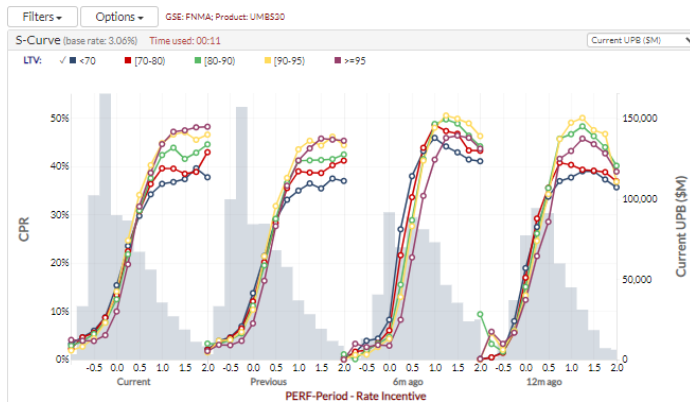


Exhibit 7: S-Curves for LTV Buckets Over Various Performance Periods

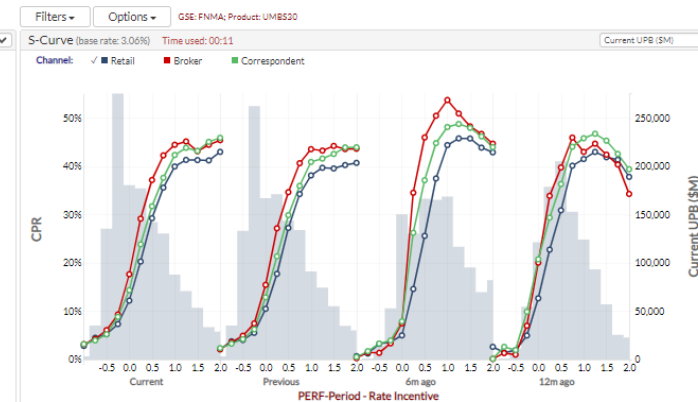


Exhibit 8: S-Curves for Channel Buckets Over Various Performance Periods

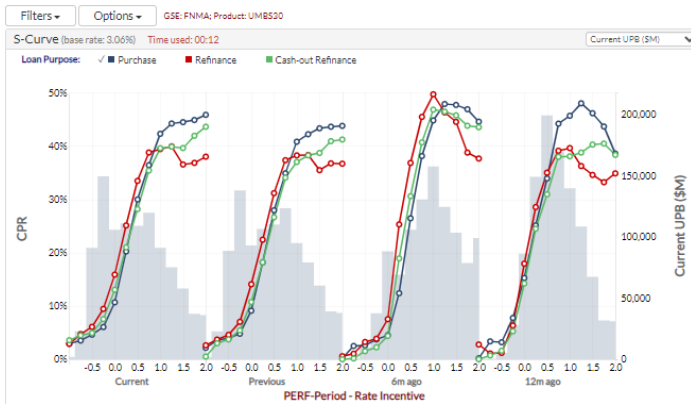


Exhibit 9: S-Curves for Loan Purpose Buckets Over Various Performance Periods

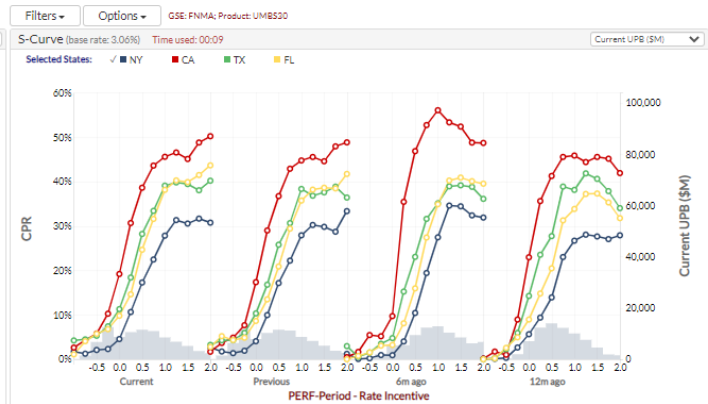


Exhibit 10: S-Curves for GEO Story Buckets Over Various Performance Periods

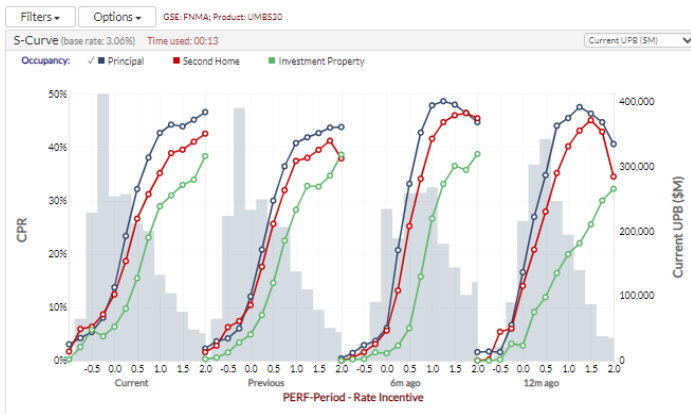


Exhibit 11: S-Curves for Occupancy Buckets Over Various Performance Periods

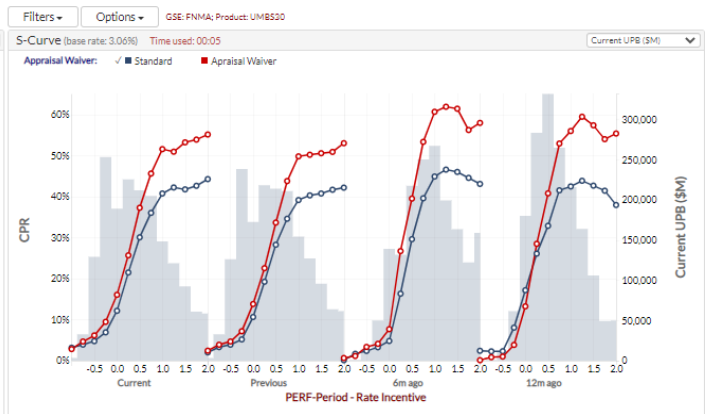


Exhibit 12: S-Curves for Appraisal Buckets Over Various Performance Periods

Additional Resources

For questions, contact the Fannie Mae Investor Help Line at 1-800-232-6643, Option 3 or by [e-mail](#).

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